

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims**

1. (Currently amended) A method for controlling and providing access to files maintained at remote storage locations to a source code management system client over a network, the method comprising:

receiving a request, at a server, for checking-out a file corresponding to a filename, from the source code management system client over the network;

determining from metadata, by the server, a remote storage location address associated with the filename where the requested file is located, wherein the metadata ~~corresponds to the files~~ includes mappings that indicate remote storage location addresses where the files are stored and indications of the number of accesses of the files by a plurality of source code management system clients, wherein the metadata ~~and~~ is stored more proximate to the server than to the source code management system client, ~~and~~ wherein the remote storage location address is based on a history of request patterns from a the plurality of source code management system clients, and wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;

sending, by the server, the remote storage location address to the source code management system client, wherein the remote storage location address where the requested file is located is more proximate to the source code management system client than to the server; and  
updating, by the server, the metadata to indicate that the requested file is checked-out and locked.

2. (Previously presented) The method of claim 1, wherein the source code management system client and the remote storage location address share a subnet of the network.

3. (Previously presented) The method of claim 2, wherein the remote storage location address identifies a storage device that is at a geographical location closer to the source code management system client than a location of the metadata, and wherein based on the received request the server that received the request for checking-out the file from the source code management system client directly communicates the remote storage location address for retrieval of the requested file to the network for transmission to the source code management system client.

4. (Previously presented) The method of claim 3, the method further comprising:  
locking the requested file;  
returning a response code to the source code management system client indicating that file check-out is successful.

5. (Previously presented) The method of claim 4, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in a second file, the method further comprising:  
updating the metadata indicating the requested second file is unlocked; and  
returning a second response code indicating that the check-in of the second file is successful.

6. (Previously presented) The method of claim 1, wherein a table maintains statistics for file usage, the method further comprising:  
processing a pattern of requests for the requested file received from source code management system clients at different geographical locations;

determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;

storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and

saving a correspondence between the requested file and storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

7. (Currently amended) The method of claim 6, wherein the determined remote storage location address is at a geographical location that is more proximate to the source code management system client having more requests for the requested file than other source code management system clients.

8. (Currently amended) The method of claim 6, wherein the determined remote storage location address is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each source code management system client and the determined remote storage location based on the number of requests for the file from each source code management system client.

9. (Currently amended) The method of claim 1,[[,]] the method further comprising:  
receiving an additional request corresponding to an additional file;  
updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request;

updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

10. (Currently amended) A method for accessing a file in a source code management system, the method comprising:

sending, from a source code management system client, a first request for checking-out the file to a server;

receiving, at the source code management system client, a storage location address containing the file in response to the first request, wherein the storage location address containing the file is located more proximate to the source code management system client than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, ~~and~~ wherein the storage location has been determined from the metadata by the server based on a history of request patterns from a plurality of source code management system clients, wherein the metadata includes mappings that indicate storage location addresses where files are stored and indications of the number of accesses of the files by the plurality of source code management system clients, and wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;

sending, from the source code management system client, a second request to the storage location address; and

receiving, at the source code management system client, an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.

11. (Previously presented) The method of claim 10, the method further comprising:  
downloading the file from the storage location address.

12. (Previously presented) The method of claim 11, wherein a third request is for checking-in the file, the method further comprising:  
sending a new version of the file to the storage location address during the checking-in of the file.

13. (Previously presented) The method of claim 12, the method further comprising:  
receiving a first response code from the server in response to the first request;  
receiving a second response code from the storage location in response to the second request; and  
receiving a third response code from the server in response to the third request.

14. (Currently amended) A system for controlling and providing access to files to source code management system clients over a network, wherein remote storage locations are accessible over the network, the system comprising:

means for receiving a request for checking-out a file corresponding to a filename, from a source code management system client over the network;

means for determining from metadata a storage location address of a remote storage location associated with the filename where the requested file is located, wherein the metadata ~~corresponds to the files~~ includes mappings that indicate storage location addresses where the files are stored and indications of the number of accesses of the files by a plurality of source code management system clients, wherein the metadata and is stored more proximate to the system than to the source code management system client, and wherein the remote storage location address is based on a history of request patterns from a the plurality of source code management system clients, wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;

means for sending the remote storage location address to the source code management system client, wherein the remote storage location address where the requested file is located is more proximate to the source code management system client than to the system; and

means for updating the metadata to indicate that the requested file is checked-out and locked.

15. (Previously presented) The system of claim 14, wherein the source code management system client and the remote storage location address share a subnet of the network.

16. (Previously presented) The system of claim 15, wherein the storage location address identifies a storage device that is at a geographical location closer to the source code management system client than a location of the metadata, and wherein the system further comprises:

means for directly communicating the storage location address for retrieval of the requested file to the network for transmission to the source code management system client, based on the received request for checking-out the file.

17. (Previously presented) The system of claim 16, the system further comprising:  
means for locking the requested file;

means for returning a response code to the remote computer source code management system client indicating that file check-out is successful.

18. (Previously presented) The system of claim 17, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in a second file, the system further comprising:

means for updating the metadata indicating the requested second file is unlocked; and  
means for returning a second response code indicating that the check-in of the second file is successful.

19. (Previously presented) The system of claim 14, wherein a table maintains statistics for file usage, the system further comprising:

means for processing a pattern of requests for the requested file received from the source code management system clients at different geographical locations;

means for determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;

means for storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and

means for saving a correspondence between the requested file and the storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

20. (Currently amended) The system of claim 19, wherein the determined remote storage location address is at a geographical location that is more proximate to the source code management system client having more requests for the requested file than other source code management system clients.

21. (Currently amended) The system of claim 19, wherein the determined remote storage location address is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each source code management system client and the determined remote storage location based on the number of requests for the file from each source code management system client.

22. (Previously presented) The system of claim 14, the system further comprising:  
means for receiving an additional request corresponding to an additional file;  
means for updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request; and  
means for updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

23. (Currently amended) A system for accessing a file in a source code management system, wherein the system is in communication with a server, the system comprising:  
means for sending a first request for checking-out the file to the server;  
means for receiving a storage location address containing the file in response to the first request, wherein the storage location address containing the file is located more proximate to the system than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the system, and wherein the storage location has been determined from the metadata by the server based on a history of request patterns from a plurality of source code management system clients, wherein the metadata includes mappings that indicate storage location addresses where files are stored and indications of the number of accesses of the files by the plurality of source code management system clients, and wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;  
means for sending a second request to the storage location address; and  
means for receiving an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.



24. (Previously presented) The system of claim 23, the system further comprising:  
means for downloading the file from the storage location address.

25. (Previously presented) The system of claim 24, wherein a third request is for  
checking-in the file, the system further comprising:  
means for sending a new version of the file to the storage location address during the  
checking-in of the file.

26. (Previously presented) The system of claim 25, the system further comprising:  
means for receiving a first response code from the server in response to the first request;  
means for receiving a second response code from the storage location in response to the  
second request; and  
means for receiving a third response code from the server in response to the third request.

27. (Currently amended) An article of manufacture including code for controlling  
and providing access to a files at storage locations on a network to a source code management  
system client coupled to a server over the network, wherein the code is capable of causing  
operations, the operations comprising:  
receiving a request, at the server, for checking-out a file corresponding to a filename from  
the source code management system client over the network;  
determining from the metadata, by the server, a remote storage location address  
associated with the filename where the requested file is located, wherein the metadata  
~~corresponds to the files~~ includes mappings that indicate remote storage location addresses where  
the files are stored and indications of the number of accesses of the files by a plurality of source  
code management system clients, wherein the metadata and is stored more proximate to the

server than to the source code management system client, and wherein the remote storage location address is based on a history of request patterns from a the plurality of source code management system clients, and wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;

sending, by the server, the remote storage location address to the source code management system client, wherein the remote storage location address where the requested file is located is more proximate to the source code management system client than to the server; and  
updating, by the server, the metadata to indicate that the requested file is checked-out and locked.

28. (Previously presented) The article of manufacture of claim 27, wherein the source code management system client and the remote storage location address share a subnet of the network.

29. (Previously presented) The article of manufacture of claim 28, wherein the storage location address identifies a storage device that is at a geographical location closer to the remote computer than a location of the metadata, and wherein based on the received request the server that received the request for checking-out the file from the source code management system client directly communicates the storage location address for retrieval of the requested file to the network for transmission to the source code management system client.

30. (Previously presented) The article of manufacture of claim 29, the operations further comprising:  
locking the requested file;  
returning a response code to the source code management system client indicating that file check-out is successful.

31. (Previously presented) The article of manufacture of claim 30, wherein the request is a first request, wherein the file for checking-out is a first file, wherein the response code is a first response code, and wherein a second request is for checking-in a second file, the operations further comprising:

- updating the metadata indicating the requested second file is unlocked; and
- returning a second response code indicating that the check-in of the second file is successful.

32. (Previously presented) The article of manufacture of claim 27, wherein a table maintains statistics for file usage, the operations further comprising:

- processing a pattern of requests for the requested file received from source code management system clients at different geographical locations;
- determining from the table a plurality of remote storage locations based on the pattern of requests for the requested file;
- storing the requested file corresponding to the filename at the determined plurality of remote storage locations; and
- saving a correspondence between the requested file and the storage location addresses corresponding to the determined plurality of remote storage locations in the metadata.

33. (Currently amended) The article of manufacture of claim 32, wherein the determined remote storage location address is at a geographical location that is more proximate to the source code management system client having more requests for the requested file than other source code management system clients.

34. (Currently amended) The article of manufacture of claim 32, wherein the determined remote storage location address is selected from the plurality of remote storage locations to minimize a distance the requested file is transmitted between each source code management system client and the remote storage location based on the number of requests for the file from each source code management system client.

35. (Currently amended) The article of manufacture of claim 27,[[,]] the operations further comprising:

receiving an additional request corresponding to an additional file;

updating the metadata and sending a response code to the source code management system client in response to determining that the additional request is one of a lock, an unlock, or a delete request; and

updating the metadata and sending location of the additional file and the response code to the source code management system client, in response to determining that the additional request is one of a check-in or an extract request.

36. (Currently amended) An article of manufacture including code for accessing a file in a source code management system from a source code management system client to a server, wherein the code is capable of causing operations, the operations comprising:

sending, from the source code management system client, a first request for checking-out the file to the server;

receiving, at the source code management system client, a storage location address containing the file in response to the first request, wherein the storage location address containing the file is located more proximate to the source code management system client than to the server, wherein metadata corresponding to the file is kept more proximate to the server than to the source code management system client, ~~and~~ wherein the storage location has been determined from the metadata by the server based on a history of request patterns from a plurality of source

code management system clients, wherein the metadata includes mappings that indicate storage location addresses where files are stored and indications of the number of accesses of the files by the plurality of source code management system clients, and wherein the history of request patterns includes the indications of the number of accesses of the files by the plurality of source code management system clients;

sending, from the source code management system client, a second request to the storage location address; and

receiving, at the source code management system client, an access to the file from the storage location address, wherein the server updates the metadata to indicate that the file is checked-out and locked after providing the access.

37. (Previously presented) The article of manufacture of claim 36, the operations further comprising:

downloading the file from the storage location address.

38. (Previously presented) The article of manufacture of claim 37, wherein a third request is for checking-in the file, the operations further comprising:

sending a new version of the file to the storage location address during the checking-in of the file.

39. (Previously presented) The article of manufacture of claim 38, the operations further comprising:

receiving a first response code from the server in response to the first request;

receiving a second response code from the storage location in response to the second request; and

receiving a third response code from the server in response to the third request.

40. (Currently amended) The method of claim 1, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address sent by the server is in the first subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~the method further comprising:~~

~~sending, by the server, an additional remote storage location address that is in the second subnet to the second source code management system client, in response to an additional request from the second source code management system client for checking out an additional file.~~

41. (Currently amended) The method of claim 10, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~the method further comprising:~~

~~sending, from the second source code management system client, an additional request for checking out an additional file to the server; and~~  
~~receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.~~

42. (Currently amended) The system of claim 14, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~wherein the remote storage location address sent by the server is in the first subnet of the network, the system further comprising:~~

~~means for sending, by the server, an additional remote storage location address that is in the second subnet to the second source code management system client, in response to an additional request from the second source code management system client for checking out an additional file.~~

43. (Currently amended) The system of claim 23, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code

management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~the system further comprising:~~

~~means for sending, from the second source code management system client, an additional request for checking out an additional file to the server; and~~

~~means for receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.~~

44. (Currently amended) The article of manufacture of claim 27, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address sent by the server is in the first subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~the operations further comprising:~~

~~sending, by the server, an additional remote storage location address that is in the second subnet to the second source code management system client, in response to an additional request from the second source code management system client for checking out an additional file.~~



45. (Currently amended) The article of manufacture of claim 36, wherein the source code management system client is a first source code management system client, wherein the first source code management system client and a second source code management system client are included in the plurality of source code management system clients, wherein the first source code management system client is in a first subnet of the network, wherein the second source code management system client is in a second subnet of the network, wherein the remote storage location address received at the first source code management system client is in the first subnet of the network, wherein the indications of the number of accesses of the files by the plurality of source code management system clients included in the metadata indicates that the first source code management system client has accessed the file a greater number of times than the second source code management system client. ~~the operations further comprising:~~

~~sending, from the second source code management system client, an additional request for checking out an additional file to the server; and~~

~~receiving, at the second source code management system client, an additional remote storage location address that is in the second subnet.~~